October 16, 2018

Texas Commission on Environmental Quality
Office of the Chief Clerk
MC-105
P.O. Box 13087
Austin, Texas 78711-3087
Submitted electronically via http://www14.tceq.texas.gov/epic/eComment/

Re: Public comments in response to Consolidated Notice of Receipt of Application and Intent to Obtain Permit, Notice of Application and Preliminary Decision, and Notice of Public Meeting for Valero Refining-Texas, L.P. Air Quality Permit No. 2501A

Dear Executive Director,

Earthjustice submits these comments on behalf of Texas Environmental Justice Advocacy Services ("t.e.j.a.s.") and the Sierra Club's Lone Star Chapter ("Commenters"). These comments respond to the Texas Commission on Environmental Quality's ("TCEQ" or "Commission") September 16, 2018 consolidated notice for an application to amend Valero Refining-Texas, L.P. Air Quality Permit No. 2501A, referenced above. We timely submit these comments by the October 16, 2018 deadline. These comments supplement our April 10, 2018 and June 4, 2018 comments, in addition to public comments submitted at the two public meetings held for this application on June 4, 2018 and September 20, 2018. Commenters continue to rely on and incorporate by reference these prior sets of comments, which are part of the file for this permit application. In addition to issues raised below, Commenters reiterate that the consolidated notice does not cure this application's notice deficiencies. The Commission has failed to address our concerns regarding the preliminarily approved increased hydrogen cyanide ("HCN") emissions authorized by this permit amendment. Commenters urge the Commission to deny this application and initiate rulemaking to make a generally applicable HCN term that is protective of human health and the environment. In the alternative, Commenters urge TCEQ to remand the application to the Executive Director for further technical review in light of data submitted by Commenters.

I. The Commission lacks federal authority to issue this permit amendment

There is no federal law basis for this permit amendment. The Permit Amendment Source Analysis & Technical Review ("Technical Review") states that this term "is being added to the permit at the direction of EPA."[1] As explained in our previous comments, there is no federal HCN National Emissions Standards for Hazardous Air Pollutants ("NESHAP"), though HCN is a Hazardous Air Pollutant. EPA regulates HCN through a NESHAP surrogate pollutant, carbon monoxide ("CO").[2] At the public meetings, TCEQ and Valero staff vaguely referenced authority to authorize a specific HCN limit derived from the federal Petroleum Refineries rule – this

[1] Technical Review 4 (undated).
[2] 40 C.F.R. § 63.1571(a)(6); 40 C.F.R. Pt. 63, Subpt. UUU, Tbl. 11.

"authority" simply does not exist.[3] The Commission has authority to set an HCN standard that is more protective than the federal standard.[4] But, the Commission has failed to show that this HCN limit is more protective than the NESHAP surrogate pollutant. In fact, EPA's initial information collection request ("ICR") for petroleum refinery HCN emissions demonstrates that these emissions warrant a more protective standard.[5] Data collected by EPA in response to the ICR shows an inverse relationship between CO and HCN at certain refineries – a finding contrary to EPA's rationale for the CO surrogate.[6] Thus, lacking federal authority and knowing that the CO surrogate may fail to protect public health and the environment, the Commission must set an HCN emissions limit that is protective and generally applicable.

The Commission used unlawful and arbitrary methods to set Valero's current HCN limit. In March of this year, the Commission preliminarily decided to permit this Valero refinery's HCN emissions at 512 tons per year ("tpy"), based on a stack test from a different refinery, in a different state.[7] Valero knowingly misrepresented its HCN emissions by not submitting its 2017 stack test to the TCEQ, showing that this refinery emits approximately 50 tons of HCN per year. Then, after the first public meeting and just days before the second, Valero asked the Commission for a lower limit, 245.28 tpy – approximately five times its current emissions.[8] This limit was arbitrarily created by Valero: Valero averaged HCN emissions at its five other Texas refineries. The TCEQ unlawfully accepted the new limit, despite Valero's own concession that the average "is a very generalized factor considering the variations in process design, capability, and sizing of Catalytic Cracking Units."[9] At the second public meeting, Valero iterated yet another HCN emissions limit: 196 tpy. Valero stated that this limit is below the TCEQ's HCN Effects Screening Levels ("ESLs") – this limit is still four times over Valero's current HCN emissions. Valero again used an arbitrary method: "The average of the three 2017 stack tests were 11.2 lb/hr of HCN which was multiplied by four for operational variability."[10] The Commission has not explained what "operational variability" entails or why it justifies a four-fold increase from current emissions.

Arbitrary averages are no way of "safeguard[ing] the state's air resources from pollution by controlling or abating air pollution and emissions of air contaminants, consistent with the

[3] 79 FR 36,880, 36,931 (June 30, 2014) (proposing CO surrogate); 80 FR 75,178, 75,182 (Dec. 1, 2015) (adopting CO surrogate).
[4] 42 U.S.C. § 7416; Tex. Health & Safety Code § 382.0173(d).
[5] 79 FR at 36,886 (description of ICR for petroleum refineries).
[6] Phyllis Fox, Ph.D., P.E., Environmental Integrity Project, *Report on Hydrogen Cyanide Emissions from Fluid Catalytic Cracking Units* 7-10 (Oct. 28, 2014) (Attachment 1); 80 FR at 75,204 ("once CO emissions are reduced to below 500 ppmv [parts per million by volume] (i.e., complete combustion is achieved), we no longer see a direct correlation between CO concentrations and HCN emissions.").
[7] Notice of Application and Preliminary Decision for an Air Quality Permit regarding Valero Refining-Texas, L.P.'s application to amend Air Quality Permit Number 2501A. (published in English on March 9, 2018 and Spanish March 11, 2018); Technical Review 1 (data is for the Valero St. Charles Refinery in Destrehan, Louisiana).
[8] Email from Matthew Lindquist, Valero Refining-Texas, L.P. to Tony Ionescu, TCEQ (Sept. 13, 2018) ("An average permitted HCN to FCCU feed capacity was calculated for all Valero Refining Texas Refineries (all 5 other Valero Texas Refineries have a HCN permit). This is a very generalized factor considering the variations in process design, capability, and sizing of Catalytic Cracking Units, however it does provide a reasonable baseline that was already determined to be protective.") (Attachment 2).
[9] *Id.*
[10] Letter from Matthew Lindquist, Valero Refining-Texas, L.P. to Tony Ionescu, TCEQ (Sept. 13, 2018) (Attachment 3).

protection of public health, general welfare, and physical property."[11] Commenters only learned of these changes through a public information request and, after the Commission refused to provide us with application materials, a letter to the Executive Director pleading for information prior to the second public meeting.[12] Despite the application's many deficiencies, if the Commission proceeds with this application, Valero cannot incorporate this term into either of its federal operating permits.

Incorporation of this term into a federal operating permit will jeopardize the Commission's delegated Clean Air Act permitting authority.[13] Neither of the public meetings held for this application followed federal operating permit notice requirements.[14] As discussed in our previous comments, the Draft Permit lacks requisite HCN terms regarding monitoring, reporting, compliance, and enforcement.[15] Apart from a new emissions limit – that is still four times Valero's actual HCN emissions – Commission staff have not offered any new or amended permit terms that would bring this amendment into federal compliance. The permit amendment lacks full incorporation into permit 2501A and failed to follow public notice requirements; thus, it cannot become part of a federal operating permit.

Commenters seek to know whether Valero, in its current renewal of Federal Operating Permit/Title V Permit No. O1381, has sought to incorporate this HCN term – despite the fact that the Commission has not issued the permit[16], and whether Valero has sought identical HCN terms for its other refineries.[17] Further, Commenters seek to know the Commission's rationale regarding HCN federal monitoring, reporting, compliance, and enforcement terms. Relatedly, how will the Commission assure that the public is not deprived of federally required HCN reporting data?[18] Lastly, what is the location of Valero's alleged 17 fenceline air quality monitors, what pollutants do they monitor for, and how may Commenters obtain the data reported?[19]

Commenters remain unmoved by TCEQ and Valero staff representations regarding federal authority to incorporate HCN into Valero's Air Quality Permit No. 2501A. Absent federal authority, the Commission must resort to Texas law. Procedurally and substantively, this permit application violates Texas law.

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[11] Tex. Health & Safety Code § 382.002(a).
[12] Letter from Isabel Segarra Treviño, Earthjustice, to Toby Baker, TCEQ, Executive Director (Sept. 12, 2018).
[13] Tex. Health & Safety Code § 382.0541(c) (allowing the Commission to incorporate state-issued preconstruction permits into federal operating permits).
[14] 30 Tex. Admin. Code § 122.340(e) ("The notice must be published at least 30 days before the date set for the hearing.").
[15] *See* Commenters' June 4, 2018 Comments 6-9.
[16] Commenters partially fulfilled PIR shows that Valero seeks to incorporate Air Quality Permit No. 2501A into its Federal Operating Permit.
[17] Valero's Texas refineries are located in Corpus Christi, Port Arthur, Texas City, Three Rivers, and McKee.
[18] Currently, Valero is required to report this data under the Emergency Planning and Community Right-to-Know Act ("EPCRA"), 42 U.S.C. § 11004, and section 103 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9603.
[19] 80 FR at 75,185 (Petroleum Refineries rule adopting requirement for fenceline monitoring).

II. The Commission may not issue this permit amendment under Texas law

Petroleum refineries are ubiquitous along the Houston Ship Channel and now we know – because of the Petroleum Refineries rule – that they all emit hydrogen cyanide. To permit these facilities at their existing HCN emissions, without further inquiry, is a violation of Texas law. "Permit conditions of general applicability shall be adopted by rule."[20] This means that the Commission must deny this application and initiate rulemaking proceedings to address HCN emissions from petroleum refineries in Texas. In the absence of clear federal regulation, and with evidence that federal regulation may not protect public health, the Commission must adhere to state law and create a generally applicable HCN emissions limit. If the Commission proceeds with this application, serious deficiencies warrant remand to the Executive Director for further technical review and opportunities for public participation.

Conducting a Best Available Control Technology ("BACT") review "upon request" violates Texas law. The Commission must conduct a BACT review before issuance of this amendment. Section 382.0518 of the Texas Health and Safety Code unambiguously directs the Commission to evaluate BACT analyses prior to permit issuance. It is impossible for TCEQ staff and the public to review BACT for HCN here, where a BACT analysis is lacking. Yet, TCEQ staff continue to refuse to require Valero to submit one. The Texas Clean Air Act assures the public an opportunity to review and comment on any approved BACT by requiring the analysis *prior* to permit issuance. The public is entitled to participation; the Consolidated Notice issued for this application fails to cure this deficiency.

The lack of a BACT analysis not only violates Texas law, but also further imperils the health of Manchester residents – a community suffering direct health impacts from cumulative operations. Any approved BACT must be below 49.056 tpy because the best available data – the 2017 stack test – shows that this Valero refinery can achieve this limit without a BACT review. A higher standard is blatantly irrational. Commenters seek to know whether the Commission will require a BACT analysis prior to permit issuance with a concurrent opportunity for public review. Further, the number of Notices of Deficiency that the Commission has issued to Valero for this application, and, wheather Valero has exceeded the allowable number of Notices of Deficiency and, thus, its application must be denied.

The Commission cannot ignore the 2017 stack test. The Petroleum Refineries rule required Valero to submit a stack test to the U.S. Environmental Protection Agency ("EPA") by August 1, 2017[21], which Commenters attached to their April 10, 2018 comments. At the second public meeting, Valero noted that it now seeks an HCN limit of 196 tpy – approximately four times its actual emissions. Commenters seek to know why the Commission cannot apply Valero's 2017 stack test in place of the contemplated stack test in Draft Permit Special Conditions 55, 65, and 66. Further, an explanation is needed as to why the Commission cannot treat this stack test just like Valero's St. Charles Refinery stack test – for which the Commission raised no issue. It is contrary to administrative efficiency to require Valero to test for the same pollutant, from the same source when a valid, recent stack test is available. Importantly, allowing

[20] Tex. Health & Safety Code § 382.0513.
[21] 80 FR 75,183.

this application to proceed unnecessarily exposes Manchester residents to drastically higher HCN emissions, and invalidates assumptions made by the TCEQ Toxicology Division.

The Commission will intentionally expose Manchester residents to four times the amount of HCN Valero currently emits. The TCEQ Toxicology Division rationalized its finding that no short- or long-term health effects would result from this permit action because: the screen modeling is conservative, the HCN ESL is conservative, and the HCN emissions are existing.[22] The Toxicology Division does not explain how the modeling or the ESLs are conservative – especially in relation to the much lower EPA HCN reference concentration. Commenters reiterate their disagreement with the Division's findings because the surrounding communities were mischaracterized and the Division did not consider cumulative impacts, along with other reasons raised in previous comments. The TCEQ failed to consider cumulative HCN emissions over Manchester and the cumulative impacts of heavily polluting industries which envelop Manchester. This violates the Commission's duties "to protect the public from cumulative risks in areas of concentrated operations" and "give priority to monitoring and enforcement in areas in which regulated facilities are concentrated."[23] At the public meetings, the Commission asked Manchester residents to consider one pollutant at a time, one permit action at a time. This is not possible for Manchester residents – many of whom describe their neighborhood as "the sacrifice zone."

This permit amendment disproportionately affects racial minorities. J.R. Harris Elementary School – a public school where 62% of students are English Language Learners, 89% are economically disadvantaged, and 100% are African American and/or Hispanic[24] – is within 700 feet of a large chemical manufacturer, within 2,000 feet of a large hazardous waste recycler, and within one mile of this Valero refinery. Nearly all of the residents in Manchester are low income, and over a third live in poverty.[25] A community ravaged by Hurricane Harvey, living in fear of the next chemical disaster in their backyard.[26] A community disproportionally affected by lax state air regulation for maintenance, startup, and shutdown operations.[27] A

[22] TCEQ Interoffice Memorandum, Health effects review of emissions from Valero Refining-Texas, L.P., Houston, Harris County, Texas (Permit No. 2501A and Tox Control No. 7385) (July 21, 2017).
[23] Tex. Water Code § 5.130.
[24] Texas Education Agency, 2015-16 School Report Card, Harris JR EL (101912166), https://rptsvr1.tea.texas.gov/cgi/sas/broker?_service=marykay&year4=2016&year2=16&_debug=0&single=N&title=2016+School+Report+Card&_program=perfrept.perfmast.sas&prgopt=2016%2Fsrc%2Fsrc_spec.sas&ptype=H&batch=N&level=campus&level=campus&search=campname&namenum=Harris&campus=101912166.
[25] Center for Democracy at the Union of Concerned Scientists, *Double Jeopardy in Houston: Acute and Chronic Chemical Exposures Pose Disproportionate Risks for Marginalized Communities* 5-6 (Oct. 2016).
[26] Union of Concerned Scientists, Fact Sheet, *Community Impact: Chemical Safety, Harvey, and Delay of the EPA Chemical Disaster Rule* (Oct. 2017), https://s3.amazonaws.com/ucs-documents/science-and-democracy/harvey-rmp-community-impact-ucs-2017.pdf; Earthjustice, *A Disaster in the Making* (last updated Sept. 21, 2018), https://earthjustice.org/features/toxic-catastrophes-texas-national-chemical-disaster-rule.
[27] Environmental Integrity Project, *Breakdowns in Air Quality: Air Pollution from Industrial Malfunctions and Maintenance in Texas* (Apr. 27, 2016), https://environmentalintegrity.org/wp-content/uploads/Breakdowns-in-Air-Quality.pdf; Environmental Integrity Project, *Accident Prone: Malfunctions and "Abnormal" Emission Events at Refineries, Chemical Plants, and Natural Gas Facilities in Texas*, 2009-2011 (July 18, 2012), https://www.environmentalintegrity.org/news_reports/documents/20120718AccidentProneFinal.pdf.

community forgotten by the TCEQ's complaint-driven enforcement process.[28] Commenters at both public meetings raised the need for a longitudinal public health study in Manchester. Despite the need for such a study, the Commission has enough evidence demonstrating how heavily polluting industries overburden Manchester. And still, the Commission asks Manchester residents to consider just one pollutant, and one permit at a time.

Manchester residents' health will suffer if the Commission allows Valero to increase its hydrogen cyanide emissions. EPA concluded that chronic non-cancer risk from refineries is "driven by emissions of hydrogen cyanide from catalytic cracking unit vents."[29] EPA conceded that its current findings likely underestimate risk because the maximum individual risk number provided "does not reflect updated emissions during the rulemaking process or the risks associated with upsets and malfunctions."[30] Epidemiological studies involving workers have shown the adverse impacts of HCN causing neurological, respiratory, cardiovascular, and thyroid effects. One study notes:

> Workers exposed to HCN for more than 5 years showed an increase in symptoms such as head ache, weakness, changes in taste and smell, irritation of throat, vomiting, lacrimation, abdominal colic, pericardial pain and nervous instability. A retrospective study made in United States among silver reclaiming workers reported that about 65% of the workers reported symptoms including eye irritation, loss of appetite, weight loss, nose block, fatigue, skin rashes, and shortness of breath, cough, sore throat, chest pain, heart palpitation and fainting. There was a significant positive trend between exposure levels of subjects and assessment of severity of poisoning.[31]

The Toxicology Division's public health effects review does not go far enough, and the Commission's environmental justice commitment is yet to be seen in Manchester. The Commission and the Toxicology Division have failed to account for Valero's previous HCN emissions and their long-term health effects on Manchester residents. The Commission must deny this permit amendment because it violates Texas law and further jeopardizes the health of Manchester residents.

III. Valero's current and previous HCN emissions warrant an enforcement action

If the Commission proceeds with this application, the Commission must initiate a concurrent enforcement action against Valero. Texas law prohibits emissions of unauthorized air

[28] Environmental Integrity Project, *Breakdowns in Enforcement: Texas Rarely Penalizes Industry for Illegal Air Pollution Released During Malfunctions and Maintenance* (July 7, 2017), https://www.environmentalintegrity.org/wp-content/uploads/2017/02/Breakdowns-in-Enforcement-Report.pdf.
[29] EPA, *Final Residual Risk Assessment for the Petroleum Refining Source Sector* 41, 44 (Sept. 2015), https://www.regulations.gov/document?D=EPA-HQ-OAR-2010-0682-0800 (listing hydrogen cyanide as "HAP 'driver[]'" for neurological hazards).
[30] *Id.* at 45.
[31] Priya Kali Dhas et al., *Study of the Effects of Hydrogen Cyanide Exposure in Cassava Workers*, 15 Indian J. Occupational Envtl. Med. 133 (2011), www.ncbi.nlm.nih.gov/pmc/articles/PMC3299098/.

contaminants[32] and the Commission has a duty to abate nuisances created because of air contamination.[33] The Commission has authority to initiate an enforcement action against Valero for its HCN emissions.[34] In fact, the Commission has entered at least five agreed orders against an Exxon refinery for HCN emissions much lower than Valero's – including a violation for emitting just one pound of HCN.[35] Each of these orders includes technical requirements and required Exxon to implement corrective actions to prevent avoidable HCN emission events. The Commission must protect Manchester residents from further exposure to high HCN levels.

At the first public meeting, Valero staff stated that the refinery has known about its HCN emissions since 2010 – eight years and, at least, 400 tons of HCN emissions that Manchester residents have endured. If the Commission insists on requiring a permit for Valero's HCN emissions, then, the Commission acknowledges that previous and current HCN emissions are unlawful, like Exxon's. As such, the Commission must initiate an enforcement action against Valero for its unpermitted HCN emissions. Valero's unlawful HCN emissions warrant additional Draft Permit terms, and agreed order terms, to assure future compliance, such as:

1. A community reporting tool, such as text messages, for HCN spikes, and Maintenance, Startup, and Shutdown operations;
2. Publicly available HCN fenceline monitoring data;
3. Compliance tables in permit 2501A which include HCN;
4. Incorporation of HCN into Special Condition 51 regarding Maintenance, Startup, and Shutdown operations;
5. Incorporation of HCN into Special Condition 59 Continuous Emissions Monitoring Systems list for the "FCC Unit Stack"; and,
6. A new Draft Permit term requiring alternate publication of all public notices in Spanish.

If the Commission has authority to permit HCN emissions, then the Commission has authority to enforce against existing unlawful HCN emission. Enforcement should include all three TCEQ Penalty Policies, 2002, 2011, and 2014 – with earlier violations not subject to the 100% enhancement cap prescribed by Tex. Water Code § 5.754(e-1). Valero *actually exposed* Manchester residents to HCN, so, the Commission must tabulate the violations under the

[32] Tex. Health & Safety Code § 382.085 ("(a) Except as authorized by a commission rule or order, a person may not cause, suffer, allow, or permit the emission of any air contaminant or the performance of any activity that causes or contributes to, or that will cause or contribute to, air pollution.").
[33] 30 Tex. Admin. Code § 101.4.
[34] Tex. Water Code § 7.051(a) ("The commission may assess an administrative penalty against a person as provided by this subchapter if…the person violates…a provision of this code or of the Health and Safety Code.").
[35] In the Matter of an Enforcement Action Concerning Exxon Mobil Corporation; RN102579307 (Mar. 9, 2011) (three emissions events: "384 lbs of hydrogen cyanide," "88 lbs of HCN," and "57 lbs of HCN"); In the Matter of an Enforcement Action Concerning Exxon Mobil Corporation RN102579307, TCEQ Docket No. 2009-1080-AIR-E (Feb. 24, 2010) (two emissions events: "1 lb of hydrogen cyanide" and "49 lbs of HCN"); In the Matter of an Enforcement Action Concerning Exxon Mobil Corporation RN102579307, TCEQ Docket No. 2008-1727-AIR-E (Oct. 7, 2009) ("150 lbs of hydrogen cyanide"); In the Matter of an Enforcement Action Concerning Exxon Mobil Corporation; RN102579307; RN102574803; and RN102212925, TCEQ Docket No. 2007-1985-AIR-E (Aug. 12, 2009) (three emissions events: "900 lbs of hydrogen cyanide," "99 lbs of hydrogen cyanide," and "285 lbs of hydrogen cyanide"); In the Matter of an Enforcement Action Concerning Exxon Mobil Corporation, RN102579307, TCEQ Docket No. 2007-0463-AIR-E (Oct. 22, 2008) ("95 lbs of hydrogen cyanide from the Fluid Catalytic Cracking Unit") (all five orders enclosed in Attachment 4).

Environmental, Property and Human-Health Matrix as an "actual release" and "major harm" because "[h]uman health or the environment [have] been exposed to pollutants which exceed levels that are protective of human health or environmental receptors."[36]

The Commission must not issue this permit amendment and, instead, initiate rulemaking for a generally applicable HCN standard. If the Commission proceeds with this application, Commenters urge the Commission to remand the application to the Executive Director for further technical review and Draft Permit Special Conditions, including the determination of an HCN BACT and opportunity for public comment. Commenters urge the Commission to pursue a concurrent enforcement action against Valero for nearly a decade of unpermitted HCN emissions.

Sincerely,

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ON BEHALF OF TEXAS ENVIRONMENTAL JUSTICE ADVOCACY SERVICES AND THE SIERRA CLUB'S LONE STAR CHAPTER

Attachments:

1 – Report on Hydrogen Cyanide Emissions from Fluid Catalytic Cracking Units
2 – Email from Matthew Lindquist, Valero Refining-Texas, L.P. to Tony Ionescu, TCEQ (Sept. 13, 2018)
3 – Letter from Matthew Lindquist, Valero Refining-Texas, L.P. to Tony Ionescu, TCEQ (Sept. 13, 2018)
4 – Exxon Mobile Agreed Orders, in two parts

[36] TCEQ, Penalty Policy (effective April 1, 2014) (supersedes Sept. 1, 2011).